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An Action Research Project: Outdoor Journaling and Classroom Behavior

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On the southern shore of the “Big Lake” there is a small town called Washburn. A town set along the shores of Chequamegon Bay on Lake Superior that hosts a small school district. The school, with an enrollment of 206 elementary students services the community of 2,280 (2000 U.S. census). The town is inhabited by long-term descendants of immigrants lured to the area by the promise of lumbering and homesteading and newcomers who were lured by the big lake and to the close proximity to the Apostle Islands.

### *Introduction*

The Washburn Elementary School, with an enrollment of 206 students, sits on a hill with views of Lake Superior. Twelve blocks to the south is the lake, and approximately 10 blocks to the northwest is a school forest with a log cabin classroom for instruction. On the premises, there is an outdoor classroom with a vista view of the lake and a school pond. The district has been designated a “Green and Healthy School” by the state of Wisconsin and the focus under District Administrator Sue Masterson, has been on becoming more eco-aware. The school garden provides children both opportunities for work, play, and nutritional foods that are included on the snack and lunch program. Teachers have been initiating restoration projects the past two years and are involved in creating a new outdoor play area on the grounds. There is a renewed focus on the environment and the importance of outdoor education. The town of Washburn was the first in the state to be declared an eco-municipality.

It is in this environmentally active atmosphere, that questions naturally emerge. Are the initiatives making a difference on student behavior and attitudes? Is there a way to document the

benefits for students in a qualitative way? It is the attempt of this action research project to look at two groups of students: early childhood students (3 -4 year olds) and fourth grade students (9 - 10 year olds) to see if there is a correlation between students experiencing outdoor activities (journaling) and subsequent increase in on-task, focused behavior. Review of literature suggests that students will benefit from outdoor activity and exposure to nature and that there is an overall calming effect on students of all ages and academic abilities. Journal articles are emerging proposing that students with attention-deficit disorder in particular are positively influenced by connections to the environment.

### *The Question*

Does thirty minutes of outdoor educational activity influence the overall behavior of students during the afternoon? Is there a difference in the on/off task behaviors and number of discipline interventions of early childhood and fourth grade students who spend time outdoors? In addition, is there a difference in the awareness and attention span of early childhood students after outdoor activity? This study seeks to clarify the answers to these questions.

### **Method**

#### *Participants*

The two groups of participants involved in this study include a group of children from a 4-year old kindergarten/Early Childhood Special Education classroom (4K) and two fourth grade classrooms. The 4K program is a two full day a week inclusionary program for children who are 4 years old by September 1<sup>st</sup> of that calendar year. Children with identified special needs on their 3<sup>rd</sup> birthday qualify to receive services within the 4K program in Washburn. Special needs

children may come 4 days a week depending on their individual needs. Services may range from occupational, physical, or speech therapy, as well as early childhood services from the early childhood specialist. The teacher within the Washburn 4K program (Betsy Carrier) has dual certification in kindergarten and special education which allows her to service all children in the program. There are 25 students in 4K (14 males, 11 females), 4 of whom receive special education services. Two special needs children come 4 days a week and 2 special needs children come 2 days a week. One child is identified as autistic, 2 children are identified as significantly developmentally delayed (SDD) and one is speech and language delayed. The program has two full time Instructional Assistants to help meet the needs of the special education students, as well as the early childhood students.

The group of fourth graders includes 19 children (10 boys, 9 girls) in one class section and 18 (12 boys, 6 girls) in the other. The students in this study exhibit the typical range of academic abilities for fourth grade. The classes include one student who is identified with an autism spectrum disorder, 3 children identified as emotionally/behaviorally disturbed (EBD) and 3 as having learning disabilities, one of whom is identified as having attention deficit disorder (ADD) as well. The teacher (Sandra Kucinski) is dually certified in elementary education and as a learning disabilities specialist.

### *Student Survey*

Students were surveyed on their preferences of outdoor activities. The fourth grade students took the seven question multiple-choice survey using an online service (surveymonkey.com). The following day, the fourth grade students assisted the early childhood students in taking the same survey. The online service compiled the responses in terms of

percentages and number of respondents to each choice. We examined the results for fourth grade students and then looked at all the data combined. The charts reflect the collective responses of both the early childhood and of the fourth grade students.



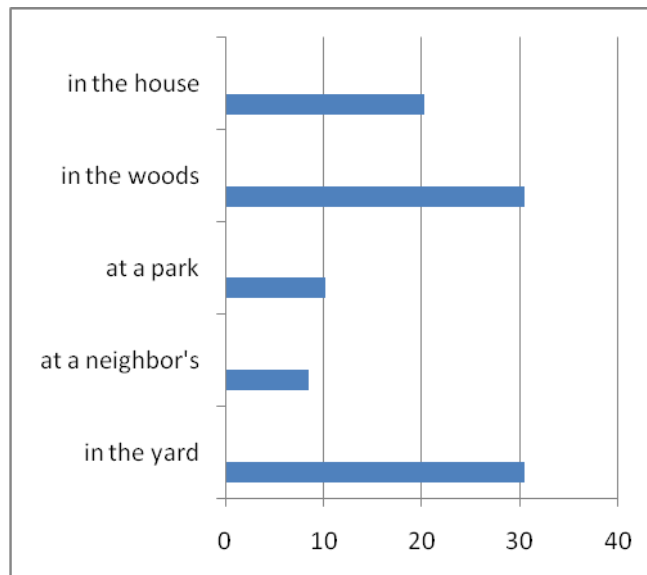
### *Survey Participants*

59 children completed the survey.

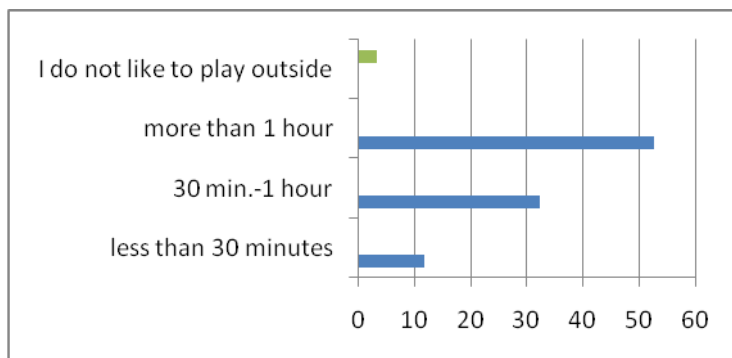
37 fourth grade students: 22 males, 15 females

25 four year old students: 15 males, 10 females

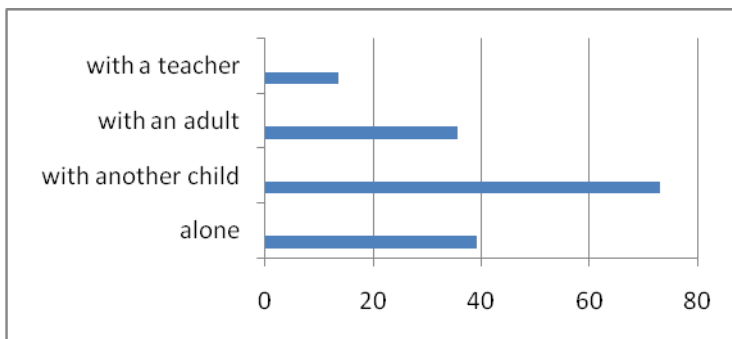
I like to play...



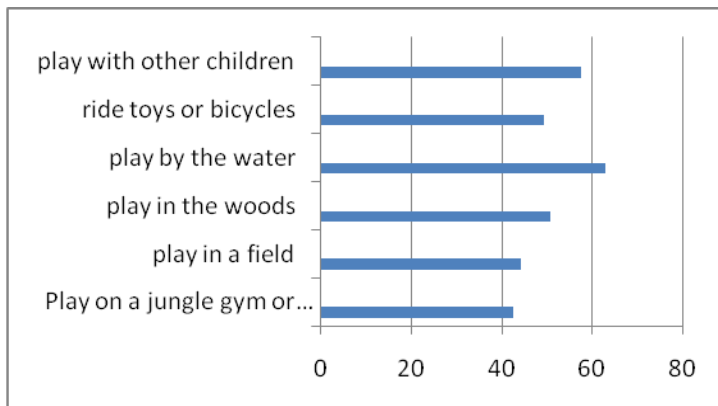
I like to play outside:



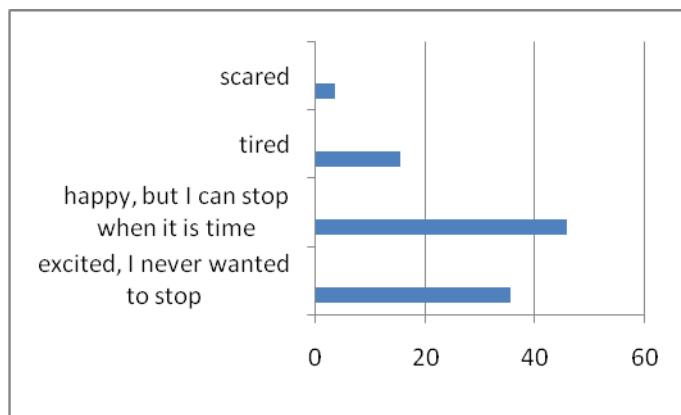
I like to play outside:



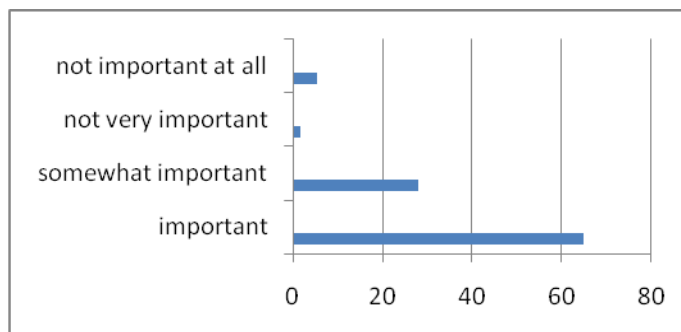
I like to do these things best when I play outdoors (choose 3)...



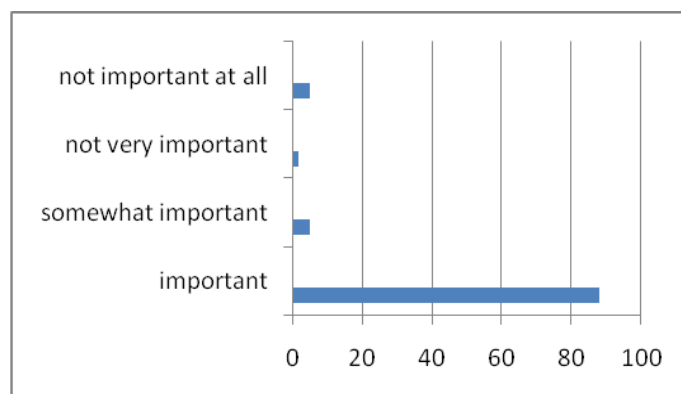
Playing outdoors makes me feel most often...



The importance of learning outside is ...



How important is it to take care of the earth?





*Observational Data*

The early childhood (EC) students visited the school pond and were given their *Scientific Pond Journal* (phenology journal) and a pencil to record the changes they observed in the pond and in the life cycle of the tadpoles. EC students were taken to the outdoor classroom and school pond for approximately 30-45 minutes for scientific pond exploration. The children explored the pond with scientific tools; nets, magnifying glasses, and mud boots. After exploring the pond, children gathered at the outdoor classroom benches to record their data in their pond journals. Data was collected through a checklist by the EC teacher throughout the afternoon to note the changes in their behavior.





Fourth grade students were given clipboards, pencils, and paper and were asked to write a journal entry on the school grounds. Students were instructed to find a comfortable spot in a variety of locations. During the first week, they were asked to make observations of their surroundings, to write on whatever was on their mind, and to draw a picture. After the first week, students were instructed to write primarily about what was “on their mind”. If they had difficulty, students could resort to making observations using all of their senses. The journal entries would only be shared with their teacher.

### *Behavior Assessment*

To test our hypothesis that outdoor activities are related to positive classroom behaviors, we devised a number of assessment tools to measure student behavior. The early childhood program used a running record checklist. The areas of consideration were: on/off task behavior, attention span, awareness, disruptiveness, and additional comments. The 4 year old kindergarten program used the following checklist:

Four Year Old Kindergarten

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Student Initials	On Task + Off Task 0	Attention Span	Awareness	Disruptive Behavior	Comments

In fourth grade a checklist of on/off task behavior and disruptive behavior was used.

Fourth Grade: Date: \_\_\_\_\_ Time: \_\_\_\_\_

Student Names	On Task + Off Task 0	Disruptive Behavior	Comments

In addition, a color chart previously implemented by Matthew Larson, 4<sup>th</sup> grade co-teacher, provided students and teacher with immediate feedback on behavior. Each student began each day with a green card indicating an “AWESOME” day. Each disruptive behavior or infraction resulted in the following color changes:

Blue - warning,

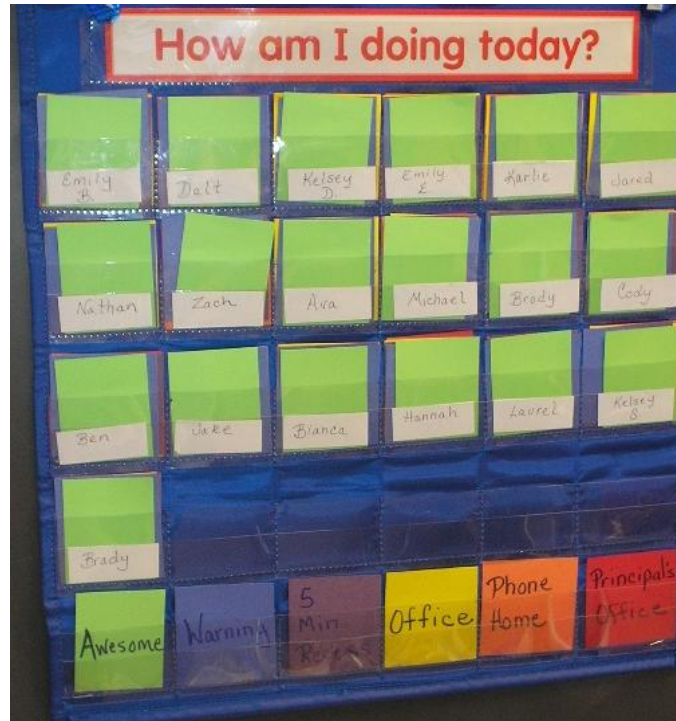
purple-5 minute recess in classroom,

Yellow -office intervention

Orange:-phone call to parent

Red - principal’s office.

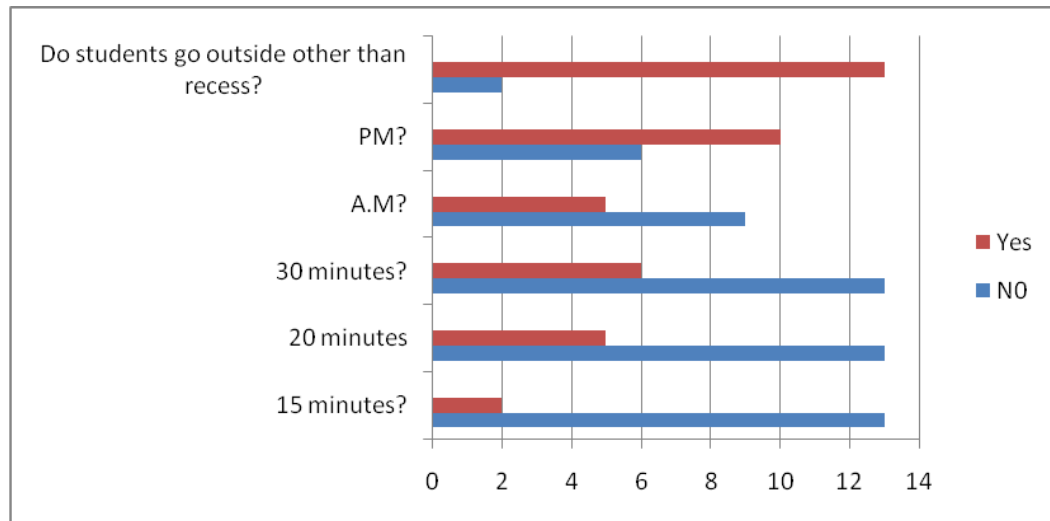
The chart was monitored each day regardless of whether or not students did outdoor journaling, so a comparison could be made.



We intended to examine the school discipline records to see if we could correlate the data. We selected random days throughout the year for comparison with the days that we took our students outdoors to do their reflective journaling. We planned on concentrating on the discipline reports that occurred in the afternoons.

### *Teacher Survey*

A survey was given to the elementary staff teachers to discover how much time students were spending outside and if the elementary grades in the school were getting time for teacher directed outdoor activities.



### Results

On the 16 teacher survey, all but two indicated that students did receive time outdoors beyond the 30 minutes that students received for recess. Eight of the 14 teachers that spent additional time outdoors indicated that the time was unstructured while the remaining 6 had teacher-directed activities for students. Overall, spending 20-30 additional minutes was the norm and by far most teachers took their students outdoors in the afternoons. Eight of the 14 respondents who answered affirmatively to taking their students outside indicated that the time was considered “free play” time while six stated that the time was guided by teacher-directed activities.

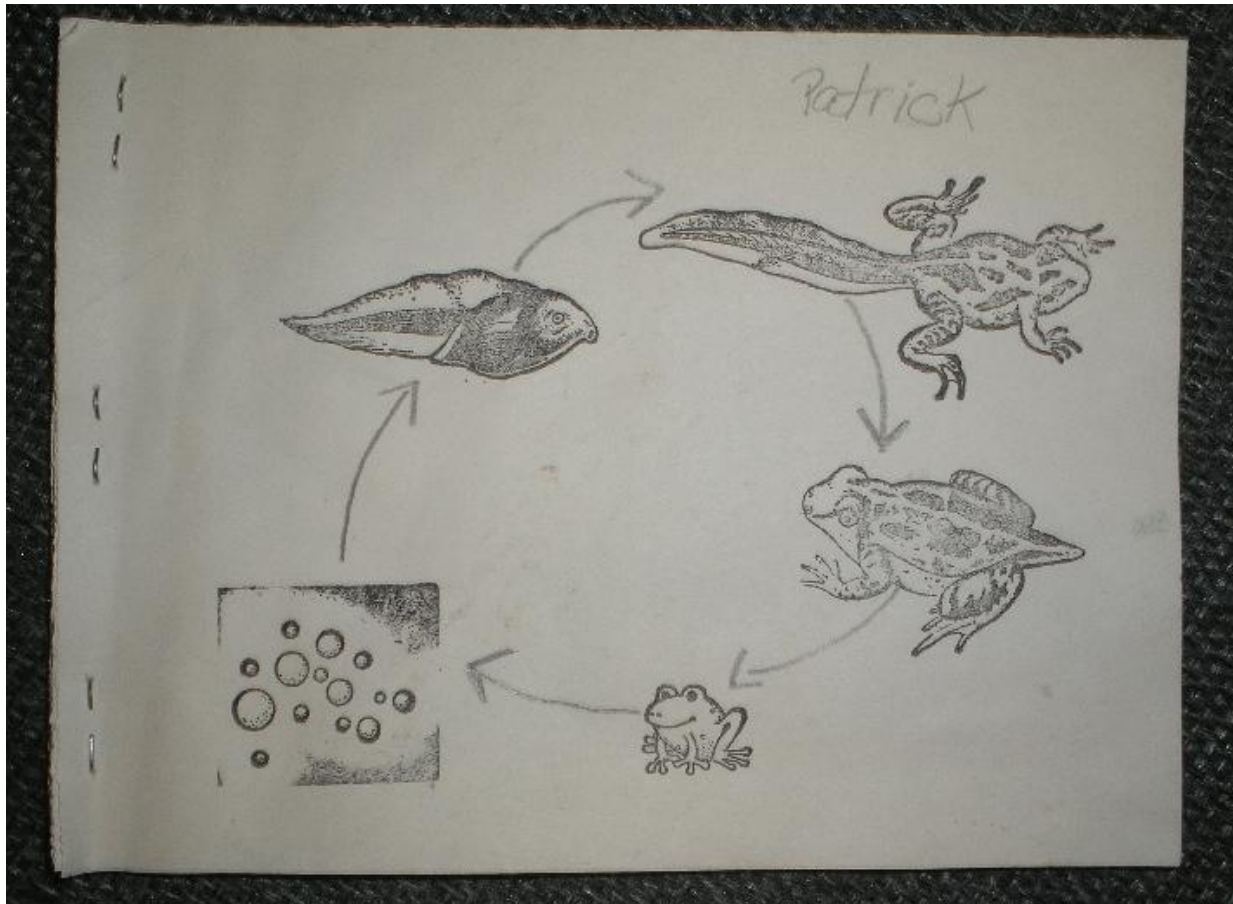
On the student survey we noted some differences between the attitudes of 4 year olds and 10 year olds. While the older children preferred playing with other children in the woods, the younger children preferred to play on a playground with an adult as well as with other children. A few of the younger children were a bit more timid in their attitudes towards being outdoors saying it made them scared or tired, while none of the fourth grade students had those feelings. Both groups indicated that taking care of the environment was very important.

We observed after 30-45 minutes of outdoor activities, the classroom behaviors for the EC special need students generally were more positive. Students were outdoors participating in a semi-structured activity. The atmosphere within the early childhood classroom after an outdoor experience was calm, focused, and with minimal distractions by the special needs students. The special needs students were noticeably more on task, calm, and focused during a teacher directed activity after the outdoor experience. They interacted with materials with greater interest and focus. They completed activities with less redirection by the teacher. They responded to peers with acceptance and return conversation. The most distractible of the special needs students was remarkably more aware of his surroundings and interacted with his peers to a greater extent during the data collection phase.





The early childhood children worked on phonology journals after making observations of the pond.



"This is where a tadpole came out of an egg."

"I saw one of those water thingers that walk on water."

"I saw water and four eggs. There were tadpoles and a log."

"I saw worms and a water strider."

"I caught tadpoles and I saw where they were and I caught them where I saw them."

"A tadpole hatched. And the mom swam away. Then I saw the dragonfly."

Reflective journaling was done by fourth grade students in the early afternoons. The majority of fourth grade students were writing primarily observations in the form of lists but with time the journal entries became more narrative and personal in nature. In the beginning, we began with a folded sheet with name and date on the cover. Opening to the inside, they wrote observations with their senses on the left and anything that was on their mind on the right, on the back side, they could write a poem or draw a picture. It was observed that the majority of time was spent drawing a picture and little time was spent on reflection. Observations became simple lists of objects. We amended the assignment and told students to focus on “What’s on my mind?” The quality of the journal entries gradually improved in both quantity and quality as the students adjusted to the assignment. It was interesting to note that the quality and personal information increased when teacher comments and feedback on their writing was immediate. Daily worries and exciting coming events began to surface in their writing. The students became more descriptive on their musings and when they resorted to observations.

“I am thinking about staying the night at my friend’s house. We are going to play video games and watch movies and play outside and doing chores witch it is not too exciting I would rather skip that part and I want to play basketball and playing with the chickens and going smelting tomorrow I can’t wate.”

Students who insisted they didn’t have anything on their mind were encouraged to make observations. There was improvement in the nature of the writing and the quality of the observations. The same student wrote both the following observations a month apart.

“feel: grass, wind, my jacket, my pant, cold, my shoes See: grass, lake, trees, school, flags, playground, birdhouse, dirt, kids, sun, eraser, flip-flops, Hear: basketball, kids, wind, E.B., L,K.S., K” (April 2010)

“I can see lots of grass, leaves, water, (lake). I see: a lighthouse, the oar dock, heat waves, and on the grass I see little green lines and tiny white dots. Also I just found a small stick. It is tan and covered with a black layer over it like a coating, the stick also has little bumps and other sticks on it. Also, the pond has little water, and when I throw my stick in



the water it floats. And when I throw a reed in it floats. The reeds stick up tall and branch out. Around the pond is mud with lots of rocks.” (May, 2010)

Reflective journaling outdoors resulted in mixed results for the special needs students in fourth grade. The students, one of whom is identified as being on the autism spectrum (Student A), and the other, Student D, who receives services for learning disabilities, was also recently removed from medication for attention deficit-disorder (ADD). Both students demonstrated a measurable benefit in subsequent classroom behavior regarding focus and on-task behavior. Student A initially wrote comments such as “how some things can fly why some things move” (April 7, 2010). Eventually he responded to the prompt “What’s on my mind?” by writing about social relationships. *“I think L\_\_\_\_\_ and me will have lots of fun and play games I think L\_\_\_\_\_s smart.”* (May 13, 2010). The overall environment in the classroom with Students A and D, although not specifically measured, was perceived to be relaxed and a sense of camaraderie prevailed. Charting indicated that the majority of students increased time on-task and there were fewer infractions noted on the behavior color chart. On days, the class did not go outside, Student A appeared to be more unfocused, off-task, and agitated. Although it is difficult to ascertain the exact cause of the agitation, as a number of causative variables could have been involved.

We did not see marked improvement in the subsequent behaviors of the students identified as emotionally disturbed (Students B and C) that were in the other fourth grade class although the general behavior was improved as monitored by the color chart. The behavior of Student B had greatly improved with the onset of the behavior chart which was instituted prior to this study in that classroom. The student feedback on his noise-making greatly reduced his disruptions. Student B was most likely to persevere in their writing, “I have nothing on my

mind” or not write at all. The other ED student became increasingly more reflective in his writing. His last entry reflects this:

“...football...it is fun and I like it because but you either win or lose and it does not matter if you win all you have to have fun. Having fun is what counts it is so fun.” or "If I was an animal I would be a snapping turtle..."

It also appeared that the transition of moving out of doors and then transitioning back inside were problematic for the EBD students. A further question would be to ascertain at what point would they adjust to the routine and would we see subsequent positive attitudes and behavior adjustments?

There were unexpected problems that entered the data collection process. Limitations included the introduction of a new student into the early childhood program while data collection had just begun. The student who is severely autistic had major challenges to transitioning and adjusting to the school environment and the presence of that student's stress had an impact on the class. In addition, the Instructional Assistant who had volunteered to keep the running records was no longer available to assist. The fourth grade limitations included a number of unplanned school-wide activities that changed the flow and routine of the class which impacted the number of reflective journal sessions. One fourth grade class was accustomed to the behavior chart and the other may have been influenced by the appearance of the chart. There was potential for the chart to serve as a treatment itself. Therefore, the chart may have been a contributing factor on influencing positive behavior. Both classes were subject to intermittent poor weather. Due to lack of access to the school discipline records we were not able to complete that task.

*Next Step*

This information will be shared with our colleagues and other educators. We will continue using journaling at both age levels and monitor the effects. The impact on the quantity and quality of student writing and expression is clear. We will attempt to make journaling routine to continue the effort of modifying behaviors in our emotionally/behaviorally disturbed students. Overall, students became increasingly more positive about the journaling process itself.

### *Final Reflection*

All students appeared to benefit from the outdoor journaling process which was demonstrated through their increased expression and awareness and by the improvement of their writing in general. The outdoor experience for the special needs students truly was a benefit and advantage to their learning experiences. We both noted that the largest gains were made by our students on the spectrum of autism. Both a 4-year old and a fourth grade student appeared to be making improved social connections through the outdoor journaling process. While all students seemed to gain in attitude, awareness, and overall classroom climate, it seemed these students had the most noticeable gains. The fourth grade emotionally disturbed students had minimal change but we are encouraged to continue the journaling and make an effort to increase the sense of routine and decrease transitional difficulties. Although we hypothesized the classroom would be overall more positive, it was enlightening to go through the process and to solidify our perceptions. Along the way, there were further encouragements we were not anticipating; such as the increased understanding of what our students were experiencing, their hopes and thoughts.

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*Appendix*

CONSENT FORM

We understand that my child's image may be used in a presentation by Betsy Carrier and Sandra Kucinski for other educators at an Earth Partnership Institute and may appear available for viewing by students of the University of Wisconsin-Madison Earth Partnership program. I understand the only information available will be their image and the fact they attended Washburn Elementary school during the spring of 2010. I understand my child's name and other personal information will NOT be available to the intended audience.

\_\_\_\_\_ Yes, my child's image may be used.

\_\_\_\_\_ No, I do not give permission for my child's image to be used.